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ABSTRACT

This article is an attempt to state an understanding of the notion of a competency as an educational objective. A competency is defined as the ability to use a concept or theory as a tool for some purpose. It is distinguished from the more general ability to judge which tool is best to use for a given purpose. A professional training program or other learning situation utilizing competencies that ignore the question of judgment is insufficient. One must be concerned with whether the use of certain tools (whose use is defined by a competency) will be wise or intelligent. There is a clear advantage in distinguishing between these two kinds of competency (the correct understanding of a tool, and the correct judgment of its value in any given situation) and in incorporating both kinds into curriculum development. (Author)

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THE NOTION OF COMPETENCE AND COMPETENCY AS EDUCATIONAL OBJECTIVES

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The following is an attempt to state an understanding of the notion of a competency as an educational objective. A competency is seen as the ability to use a concept or theory as a tool for some purpose; it is distinguished from the more general ability to judge which tool is best to use for a given purpose.

SPECIFICITY

Consider the following pairs of statements of possible educational objectives:

A_1 to understand electricity

B_1 to repair a radio

A_2 be able to help teachers improve their teaching

B_2 to analyze a lessor

We all recognize A. in each case to be undesirably general and B. in each case to be somewhat better. There are two reasons why generality in educational objectives is undesirable, and why its opposite, specificity, is desirable. The more general, the less the statement can serve:

1) as a guide to program construction or teaching methodology;

2) as a criterion for evaluation. The ideal situation for testing is often thought to be where there is little reliance on subjective judgments of quality and where the results are an obvious yes or an obvious no. Note that judgment is still called for here, as to whether the radio has been repaired, or the lesson analyzed. It is the need to interpret a very general statement has has been eliminated.

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BEHAVIOR AND ACHIEVEMENTS

The two 'B' statements above are not statements of behaviors. They might best be called 'achievement' statements (Gilbert Ryle). That is to say, they denote successes (this is why they require a judgment of quality), but they do not specify what must be done to bring about the success. Or one might say: they identify a purpose or task, but not the procedure required. Though better than the 'A' statements, they are not yet satisfactory.

Consider the following, as attempts to improve the statements:

B_1 to repair a radio

C_1 to solder together two wires

B_2 to analyze a lesson

C_2 to count the number of times a teacher asks the student a question

In both cases, the 'C' statement identifies a behavior. In both cases, they are more specific, and in both cases look as though they would serve as clearer guides to teaching or testing.

However, they are not ideal as statements of educational objectives. One way to explain this is to say that they are <u>too</u> specific. How many different such behaviors might be necessary to repair a radio? One might have to wire a transformer, replace a tube, adjust a tuner--And how many kinds of items might one count in a lesson? and how many kinds of things might one do besides counting?

The result is that to deal with behavioral objectives like this seems to require that one forecast in advance exactly and exhaustively what is to be done in any case of repairing, or analyzing. This makes for inflexibility, and inconvenience. In addition, specificity like this results in a reductionist tendency, whereby one mentions only behaviors belonging to the lower levels of the cognitive range. Whether this is necessary or not is not clear (Ira Steinberg). But it is at least an open question whether all of the intellectual abilities that are educationally desirable can be stated in behavioral terms.

This situation (the need to state a great mutliplicity of behaviors) has also led to confusion among the 'behavioral objectives' advocates. Mager, for example, lists B_1 (repair a radio) as an example of a 'behavioral objective'! Yet it is clearly an achievement which might require any combination of many behaviors to reach--depending on what is wrong with the radio.

Another way of putting this objection is to point out that statements C_1 and C_2 are not themselves educationally valuable. Counting questions, for example, is itself not worthwhile unless it is done with some aim in mind. It may, and may not, be part of analyzing a lesson. If it is not, it is not worthwhile, and yet behaviorally it does not differ from the meaningful case. And this, it will be noticed, becomes more obvious as one ascends the scale of worthwhile intellectual abilities. This is the result of isolating the item from the context of some meaningful use. Statements of purposeless behaviors cannot be educationally valuable because they do not call for intelligence.

COMPETENCIES

Consider now the following pairs:

B_1 to repair a radio

D_1 to use a voltmeter on a radio circuit to trace a fault

B_2 to analyze a lesson

D_2 To use the B. O. Smith logical interaction analysis technique to analyze a lesson

Both 'D' statements I would like to call statements of competencies. The crucial thing about them is that they both identify a particular tool and an achievement for which it is to be used. This means that one can be as specific as one wants to be, with regard both to the tool and the conditions in which it is to be used. On the other hand, one does not have to specify in detail the behaviors required and which vary from circumstance to circumstance.

Another way to say this is to point out that the notion of a 'tool' picks out exactly what is educationally valuable. The use of a 'tool', for example, transfers easily from one situation to another. This is because it requires a conceptual component. One understands something as a tool only when one knows the kind of achievements it can be used to reach, and how it works.

To use a soldering iron as a tool implies understanding the purpose involved, which means understanding something about the flow of electricity. This is exactly what the notion of 'behavior' omits, and 'tool' points up. Similarly, concepts by themselves may be tools, and in most professional areas will constitute the important repertoire to be acquired. Thus, the various kinds of schemes for classroom interaction analysis are basic tools for supervisors, and consist of concepts, or sets of concepts. And one might add that one understands a concept only insofar as one sees in what ways and for what purposes it can be used (Dewey).

KINDS OF COMPETENCIES

It would be possible, then, to rewrite a curriculum in terms of competencies by identifying the concepts one wants to teach and the kind of achievements the learner should be able to use them as tools for.

In an area like educational administration, it seems plausible to divide the tools into technical, social and personal ones. The B. O. Smith analysis would be a technical (conceptual) tool - i.e., one useful chiefly to supervisors, principals, etc. The concept of social class is an example of a more general tool, that might well be used by educators. The last category applies to human interaction, where there are perhaps fewer, yet very important, distinct tools. An example might be the notion of ego-defense, which may be used in thinking about the behavior of others or of oneself. Example:

Technical	D_2	to use the B. O. Smith logical interaction technique to analyze a lesson
General	D_3	to use the notion of social class to analyze a conflict in goals between parents and teachers in a school

Human	D_4	to use the notion of ego-defense to describe one's own attitude to the breach of school rules

These categories of kinds of competencies, and the next of levels, are a reworking of the model of McCleary, devised for immediate practical rather than theoretical purposes.

LEVELS OF COMPETENCE

So far competence has been described as the ability actually to use a concept or theory for some purposes. This is what might be called the level of application. There is both an earlier and later possible. The earlier is the level of familiarity, where the student knows about the tool in a general way, and the uses to which it may be put; but cannot necessarily use it for specific purposes. This kind of competence is often what is necessary for an administrator, and requires less in the way of detail or technical mastery.

The major deficiency of a program organized along these lines, however, lies in its ignoring the question of judgment. Competencies like these are possible to evaluate easily because they are abstracted from the complexity of 'normal' situations. Furthermore, the attention of the student in learning, and the teacher in evaluating, is on the correct understanding or use of a specific tool. This is the virtue of the system. But it means that attention is not on questions of the selection of tools in particular cases; in other words, one is not concerned with the question whether their use is wise or intelligent. To raise that question is to bring back the need for. . .subjective judgments of quality, which the statements of competency diminished. However, it is not desirable in professional programs to omit questions of judgment. Therefore, it appears that one needs also to present learners with molar, complex problems, in order to raise the question which tools should be chosen. The advantage is to have separated clearly between these two kinds of competence: in the use of a tool, and in the choice of a tool. In a sense, the latter is more important than the former, but depends upon it.

Another way to put this last point is to say that being able to use a tool wisely (as opposed to just being able to use it) involves some understanding of its limitations, its compatibility or incompatibility with other tools, its relationship to purposes other than the one it is designed to serve, and so on. It is, therefore, a more critical, theoretical and flexible level of attainment; and perhaps for this reason it cannot be called properly a level. However, it is certainly something different from the previous levels, which yet builds on them. Therefore, we can represent it schematically as in the following, which may be of use in curriculum planning.

The model presented on the following page and the rationale upon which it is constructed might aid to clarify some of the misconceptions about the competency concept and aid in a more rational approach to identifying competencies to be employed in curriculum development.

	TECHNICAL	GENERAL	PERSONAL
FAMILIARITY			
APPLICATION			
JUDGMENT			

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